

ABSTRACT

A multi-nozzle ink jet head having a diaphragm that effectively utilizes the force generated by thin-film piezoelectric elements is disclosed. The head (2) has a head substrate (28) in which are formed a plurality of nozzles (39) and a plurality of pressure chambers (29), a multi-layer diaphragm (23-1, 23-2), piezoelectric elements (27), and individual electrodes (26). By making the thickness of the common electrode layer (23-1) of the multi-layer diaphragm be thin but such that problems do not occur during multi-pin driving, optimization of the rigid layer becomes possible, and hence it is possible to use the force generated by the thin-film piezoelectric elements efficiently in ink ejection.